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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/525,778
Filing Date: February 28, 2005
Appellant(s): BOZIONEK ET AL.

Ralph G. Fischer
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 06/25/2010 appealing from the Office action mailed 12/16/2009.

(1) Real Party in Interest

The real party in interest is Siemens Aktiengesellschaft.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 33-51 are pending.

Claims 33-51 stand rejected.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

5,740,374	RAFFALI-SCHREINEMACHERS	4-1998
6,229,818	BELL	5-2001
7,274,704	OULD-BRAHIM	9-2007
7,136,372	NILSEN	11-2006

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 45 and 46** are rejected under 35 U.S.C. 102(b) as being anticipated by Raffali-Schreinemachers (Patent Number: 5,740,374), hereafter referred to as Raffali.

3. **In regard to Claims 45 and 46**, Raffali teaches in column 2, line 49 to column 3, line 15, and in column 3, lines 4-62, and in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, regardless of a local protocol of a destination sub-network, at a source side a translation is carried out from a local source protocol into a reference protocol, where the source sub-network in this context does not need to know the protocol of the destination sub-network, at the destination side a translation is carried out from a reference protocol into a local protocol of the destination sub-network, and where local traffic is transferred under the control of a local protocol and transit traffic is transferred unchanged by means of tunneling, and the control information of traffic originating from another sub-network and intended for the local sub-network is translated into the format of the local protocol and transferred further while using the local protocol, and translation steps are only carried out at the source and destination sub-network, and the intermediate sub-networks transfer the messages, including their original control code, in a transparent manner and without manipulating the contents, and where a message of sub-network 2 (FIG. 4) (a first network) is transferred to sub-network 6 (FIG. 4) (a second network) with the message being tunnelled as transit traffic through the networks 3 . . . 5 (a third network) and the headers and trailers of the messages being translated at the source side and destination side, and the message, with its header H_R and trailer T_R are tunnelled through the sub-networks 3, 4 and 5 (FIG. 4) and first decapsulated, in a decapsulation member 32 (FIG. 4), at the interface between the sub-networks 5 and 6 (FIG. 4) (a network access device for a third network, the network access device for transmitting a signaling message having a first signaling protocol

received from a first device in a first network to a second device in a second network), and subsequently translated from the R format into the format of the protocol in sub-network 6 (FIG. 4) (a network access unit converts a signal message into a second signaling protocol), where at the interface between the sub-networks 5 and 6 the message and its header H_R (FIG. 4) and trailer T_R (FIG. 4a) are unwrapped, after which said header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6 (a protocol conversion device converting the signaling message received from the first device to a converted signaling message having a second signaling protocol that is different from the first signaling protocol if the second device does not support the first signaling protocol) and which take care of the control of the message through sub-network 6 to terminal 7 (FIG. 4) (the network access device transmitting the converted signaling message to the second device, the converted signaling message and the signaling message have identical signaling targets) (a network access device for a third network transmitting a signaling message having a first signaling protocol received from a first device in a first network to a second device in a second network, a protocol conversion device converting the signaling message received from the first device to a converted signaling message having a second signaling protocol that is different from the first signaling protocol if the second device does not support the first signaling protocol, the network access device transmitting the converted signaling message to the second device, the converted signaling message and the signaling message have identical signaling targets).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claim 33-35, 37, 39-44 and 47-51** are rejected under 35 U.S.C. 103(a) as being unpatentable over Raffali-Schreinemachers (Patent Number: 5,740,374) in view of Bell (Patent No.: 6,229,818), hereafter respectively referred to as Raffali and Bell.

7. **In regard to Claims 33 and 34**, Raffali teaches in column 2, line 49 to column 3, line 15, and in column 3, lines 4-62, and in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, regardless of a local protocol of a destination sub-network, at a source side a translation is carried out from a local source protocol into a reference protocol, where the source sub-network in this context does not need to know the protocol of the destination sub-network, at the destination side a translation is carried out from a reference protocol into a local protocol of the destination sub-network, and where local traffic is transferred under the control of a local protocol and transit traffic is transferred

unchanged by means of tunneling, and the control information of traffic originating from another sub-network and intended for the local sub-network is translated into the format of the local protocol and transferred further while using the local protocol, and translation steps are only carried out at the source and destination sub-network (the originating unit supporting a first signaling protocol and the destination unit supporting a second signaling protocol), and the intermediate sub-networks transfer the messages (the third network connecting the first network to the second network), including their original control code, in a transparent manner and without manipulating the contents, and where a message of sub-network 2 (FIG. 4) (a first network) is transferred to sub-network 6 (FIG. 4) (a second network) with the message being tunnelled as transit traffic through the networks 3 . . . 5 (a third network) and the headers and trailers of the messages being translated at the source side and destination side (forwarding at least one signaling message with a network access unit of a third network, the at least one signaling message being from an originating unit in a first network, the at least one signaling message being intended for a destination unit in a second network, the originating unit supporting a first signaling protocol and the destination unit supporting a second signaling protocol, the third network connecting the first network to the second network), and the message, with its header H_R and trailer T_R are tunnelled through the sub-networks 3, 4 and 5 (FIG. 4) and first decapsulated, in a decapsulation member 32 (FIG. 4) (network access unit of a third network), at the interface between the sub-networks 5 and 6 (FIG. 4) (transmitting a signaling message from the originating unit to the network access unit by tunneling via the third network, the signaling message

comprising destination datum identifying the destination unit), and subsequently translated from the R format into the format of the protocol in sub-network 6 (FIG. 4) (a network access unit converts a signal message into a second signaling protocol), where at the interface between the sub-networks 5 and 6 the message and its header H_R (FIG. 4) and trailer T_R (FIG. 4a) are unwrapped, after which said header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6 and which take care of the control of the message through sub-network 6 to terminal 7 (FIG. 4) (determining that the signaling message is intended for the destination unit via the network access unit assessing the destination datum; converting the signaling message into the second signaling protocol if the second signaling protocol is different from the first signaling protocol and transmitting the converted signaling message such that the converted signaling message is sent to the destination unit) (forwarding a signaling message with a network access unit of a third network, the at least one signaling message being from an originating unit in a first network, the at least one signaling message being intended for a destination unit in a second network, the originating unit supporting a first signaling protocol and the destination unit supporting a second signaling protocol, the third network connecting the first network to the second network, transmitting a signaling message from the originating unit to the network access unit by tunneling via the third network, the signaling message comprising destination datum identifying the destination unit, determining that the signaling message is intended for the destination unit via the network access unit assessing the destination datum, converting the signaling message

into the second signaling protocol if the second signaling protocol is different from the first signaling protocol and transmitting the converted signaling message such that the converted signaling message is sent to the destination unit, a network access unit converts a signal message into a second signaling protocol, a destination datum is read by an access function).

8. Raffali fails to teach forwarding a signaling message without converting the signaling message to another signaling protocol if the first and second signaling protocols are identical.

9. Bell teaches in column 4, lines 61-65, and in column 7, lines 24-56, and in FIGS. 2, 3 and 4, central office may be equipped with modems to interface a service provider 202 (FIG. 2) to a SOHO 200 (FIG. 2), such as xDSL modems to allow service providers to provide xDSL data transfers over the telephone connections, and a master node (FIGS. 2 and 3) receives one or more data packets, and the data packets are received 400 (FIG. 4) from an internet service provider (FIGS. 2 and 3) or a central office, and the one or more data packets are processed 402 (FIG. 4) by the digital signal processing (DSP) by running a demodulation algorithm for the xDSL load, and these processed data packets are stored 404 (FIG. 4) in a memory of the master node, the master node determines 406 (FIG. 4) whether the stored packet includes data targeted for one or more of the nodes within a local network (FIGS. 2 and 3), and where the master node determines 406 (FIG. 4) that a stored packet is targeted for the local network, the master node determines 410 (FIG. 4) what the local identifier (a signaling message comprising destination datum identifying a destination unit) is in order to assist

the master node in properly routing the data within the local network (determining that the signaling message is intended for the destination unit via the network access unit assessing the destination datum), and in some situations, the internet data transfer protocol may be different from the data transfer protocol used by the local network, and this is possible due to the isolation of the local network and the internet connections provided by the master node, and the master node determines 412 (FIG. 4) whether a protocol conversion is required, and if so, converts 414 (FIG. 4) from the internet protocol to the local protocol, and when no protocol conversion is required the data is transferred 416 (FIG. 4) to the local node which has been identified by the master node (a signaling message comprising destination datum identifying a destination unit, determining that the signaling message is intended for the destination unit via the network access unit assessing the destination datum, forwarding a signaling message without converting the signaling message to another signaling protocol if first and second signaling protocols are identical).

10. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not

enacting a conversion process if the transferring of certain packets between networks is not needed.

11. **In regard to Claims 35, 37 and 44**, as presented in the rejection of Claim 33, Raffali in view of Bell teaches a network access unit.

12. Raffali fails to teach functions of a telecommunication system that serves for switching connections for transmission of voice data in a private data communication network, and a network access function for terminal devices of a local data communication network, and a signaling message relates to signaling for voice data transmission.

13. Bell teaches in column 4, line 66 to column 5, line 12, and in FIG. 2, a variety of CPE devices may be part of the SOHO environment 200 (FIG. 2), and the devices comprising the SOHO environment illustrated in FIG. 2 include the computing unit 208 and the facsimile equipment 210, and both voice and data may be transmitted from the service provider 202 (FIG. 2) to the SOHO 200, where it is routed via the local twisted-pair line supplied by the local loop 204 (FIG. 2), and signal splitters 212, 214 and 216 (FIG. 2) are used to distinguish voice signals from data signals, and to route the appropriate voice and data signals to the appropriate device within the SOHO 200, and voice signals may be input to the splitter 214 (FIG. 2), which filters the voice signals from any information directed to the computer 208 (FIG. 2), while allowing the voice signals to be transmitted to the telephone equipment 218 (FIG. 2) (functions of a telecommunication system that serves for switching connections for transmission of

voice data in a private data communication network, and a network access function for terminal devices of a local data communication network, and a signaling message relates to signaling for voice data transmission).

14. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed.

15. **In regard to Claims 39-43**, as presented in the rejection of Claim 33, Raffali in view of Bell teaches a network access unit.

16. Raffali fails to teach first and second signaling protocols are identical if they are both from a same protocol family, a destination datum is read by an access function, and determining a first signaling protocol of a signaling message and determining a second signaling protocol required by a destination unit that is related to the destination datum, and a network access unit determines a first signaling protocol of a signaling message and determines a second signaling protocol required by a destination unit that

is related to a destination datum, and a network access unit storing a signaling message in a storage unit.

17. Bell teaches in column 4, lines 61-65, and in column 7, lines 24-56, and in FIGS. 2, 3 and 4, central office may be equipped with modems to interface a service provider 202 (FIG. 2) to a SOHO 200 (FIG. 2), such as xDSL modems to allow service providers to provide xDSL data transfers over the telephone connections, and a master node (FIGS. 2 and 3) receives one or more data packets, and the data packets are received 400 (FIG. 4) from an internet service provider (FIGS. 2 and 3) or a central office, and the one or more data packets are processed 402 (FIG. 4) by the digital signal processing (DSP) by running a demodulation algorithm for the xDSL load, and these processed data packets are stored 404 (FIG. 4) in a memory of the master node (a network access unit storing a signaling message in a storage unit), the master node determines 406 (FIG. 4) whether the stored packet includes data targeted for one or more of the nodes within a local network (FIGS. 2 and 3) (a destination datum is read by an access function), and where the master node determines 406 (FIG. 4) that a stored packet is targeted for the local network, the master node determines 410 (FIG. 4) what the local identifier is in order to assist the master node in properly routing the data within the local network, and in some situations, the internet data transfer protocol may be different from the data transfer protocol used by the local network, and this is possible due to the isolation of the local network and the internet connections provided by the master node, and the master node determines 412 (FIG. 4) whether a protocol conversion is required, and if so, converts 414 (FIG. 4) from the internet protocol to the

local protocol, and when no protocol conversion is required the data is transferred 416 (FIG. 4) to the local node which has been identified by the master node (first and second signaling protocols are identical if they are both from a same protocol family, a destination datum is read by an access function, determining a first signaling protocol of a signaling message and determining a second signaling protocol required by a destination unit that is related to the destination datum, and a network access unit determines a first signaling protocol of a signaling message and determines a second signaling protocol required by a destination unit that is related to a destination datum, and a network access unit storing a signaling message in a storage unit).

18. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed.

19. **In regard to Claim 47**, as presented in the rejection of Claim 45, Raffali teaches a protocol conversion device.

20. Raffali fails to teach a decision device connected to a protocol conversion device, the decision device configured to determine whether a signaling message requires conversion into a converted signaling message.

21. Bell teaches in column 4, lines 61-65, and in column 7, lines 24-56, and in FIGS. 2, 3 and 4, central office may be equipped with modems to interface a service provider 202 (FIG. 2) to a SOHO 200 (FIG. 2), such as xDSL modems to allow service providers to provide xDSL data transfers over the telephone connections, and a master node (FIGS. 2 and 3) receives one or more data packets, and the data packets are received 400 (FIG. 4) from an internet service provider (FIGS. 2 and 3) or a central office, and the one or more data packets are processed 402 (FIG. 4) by the digital signal processing (DSP) by running a demodulation algorithm for the xDSL load, and these processed data packets are stored 404 (FIG. 4) in a memory of the master node, the master node determines 406 (FIG. 4) whether the stored packet includes data targeted for one or more of the nodes within a local network (FIGS. 2 and 3), and where the master node determines 406 (FIG. 4) that a stored packet is targeted for the local network, the master node determines 410 (FIG. 4) what the local identifier is in order to assist the master node in properly routing the data within the local network, and in some situations, the internet data transfer protocol may be different from the data transfer protocol used by the local network, and this is possible due to the isolation of the local network and the internet connections provided by the master node, and the master node determines 412 (FIG. 4) whether a protocol conversion is required, and if so, converts 414 (FIG. 4) from the internet protocol to the local protocol, and when no

protocol conversion is required the data is transferred 416 (FIG. 4) to the local node which has been identified by the master node (a decision device connected to a protocol conversion device, the decision device configured to determine whether a signaling message requires conversion into a converted signaling message).

22. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed.

23. **In regard to Claim 48**, as presented in the rejection of Claim 45, Raffali teaches a protocol conversion device.

24. Raffali fails to teach a telecommunication device functional unit connected to a protocol conversion device.

25. Bell teaches in column 5, lines 51-59, and in FIG. 3, a master node 304 (FIG. 3) includes interface circuitry which includes an xDSL modem that modulates and demodulates data between the SOHO environment 300 (FIG. 3) and a remote node

such as a service provider 306 (FIG. 3), and includes a local interface circuit 308 (FIG. 3) and a remote interface circuit 310 (FIG. 3), and the local interface circuit 308 includes a transceiver 312 (FIG. 3), a digital signal processing (DSP) unit 314 (FIG. 3), and a memory 316 (FIG. 3), and the remote interface circuit 310 (FIG. 3) includes a transceiver 318 (FIG. 3), a DSP unit 320 (FIG. 3), and a memory 322 (FIG. 3) (a telecommunication device functional unit connected to a protocol conversion device).

26. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed.

27. **In regard to Claim 49**, as presented in the rejection of Claim 45, Raffali teaches a protocol conversion device.

28. Raffali fails to teach a network access device is configured to communicate with a first device of a first network and a second device of a second network such that a

signaling message is forwarded to the second device without converting the signaling message if the first signaling protocol is supported by the second device.

29. Bell teaches in column 4, lines 61-65, and in column 7, lines 24-56, and in FIGS. 2, 3 and 4, central office may be equipped with modems to interface a service provider 202 (FIG. 2) to a SOHO 200 (FIG. 2), such as xDSL modems to allow service providers to provide xDSL data transfers over the telephone connections, and a master node (FIGS. 2 and 3) receives one or more data packets, and the data packets are received 400 (FIG. 4) from an internet service provider (FIGS. 2 and 3) or a central office, and the one or more data packets are processed 402 (FIG. 4) by the digital signal processing (DSP) by running a demodulation algorithm for the xDSL load, and these processed data packets are stored 404 (FIG. 4) in a memory of the master node, the master node determines 406 (FIG. 4) whether the stored packet includes data targeted for one or more of the nodes within a local network (FIGS. 2 and 3), and where the master node determines 406 (FIG. 4) that a stored packet is targeted for the local network, the master node determines 410 (FIG. 4) what the local identifier is in order to assist the master node in properly routing the data within the local network, and in some situations, the internet data transfer protocol may be different from the data transfer protocol used by the local network, and this is possible due to the isolation of the local network and the internet connections provided by the master node, and the master node determines 412 (FIG. 4) whether a protocol conversion is required, and if so, converts 414 (FIG. 4) from the internet protocol to the local protocol, and when no protocol conversion is required the data is transferred 416 (FIG. 4) to the local node

which has been identified by the master node (a network access device is configured to communicate with a first device of a first network and a second device of a second network such that a signaling message is forwarded to the second device without converting the signaling message if the first signaling protocol is supported by the second device).

30. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed.

31. **In regard to Claim 50**, Raffali teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, a message (a signaling message), with its header H_R and trailer T_R are tunnelled through the sub-networks 3, 4 and 5 (FIG. 4) and first decapsulated, in a decapsulation member 32 (FIG. 4), at the interface between the sub-networks 5 and 6 (FIG. 4), and subsequently translated from the R format into the format of the protocol in sub-network 6 (FIG. 4), where at the interface between the sub-

networks 5 and 6 the message and its header H_R (FIG. 4) and trailer T_R (FIG. 4a) are unwrapped, after which said header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6 and which take care of the control of the message through sub-network 6 to terminal 7 (FIG. 4) (a second device) (a signaling message is converted to a converted signaling message prior to being able to be transmitted to a second device).

32. **In regard to Claim 51**, as presented in the rejection of Claim 45, Raffali in view of Bell teaches a network access device.

33. Raffali fails to teach a network access device is also configured to store a signaling message on a storage device.

34. Bell teaches in column 4, lines 61-65, and in column 7, lines 24-56, and in FIGS. 2, 3 and 4, central office may be equipped with modems to interface a service provider 202 (FIG. 2) to a SOHO 200 (FIG. 2), such as xDSL modems to allow service providers to provide xDSL data transfers over the telephone connections, and a master node (FIGS. 2 and 3) receives one or more data packets, and the data packets are received 400 (FIG. 4) from an internet service provider (FIGS. 2 and 3) or a central office, and the one or more data packets are processed 402 (FIG. 4) by the digital signal processing (DSP) by running a demodulation algorithm for the xDSL load, and these processed data packets are stored 404 (FIG. 4) in a memory of the master node (a network access device is also configured to store a signaling message on a storage device), the master node determines 406 (FIG. 4) whether the stored packet includes

data targeted for one or more of the nodes within a local network (FIGS. 2 and 3), and where the master node determines 406 (FIG. 4) that a stored packet is targeted for the local network (a network access device is also configured to store a signaling message on a storage device).

35. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed.

36. **Claim 36** is rejected under 35 U.S.C. 103(a) as being unpatentable over Raffali in view of Bell, and further in view of Ould-Brahim et al. (Patent No.: US 7,274,704 B1), hereafter referred to as Ould-Brahim.

37. **In regard to Claim 36**, as presented in the rejection of Claim 33, Raffali in view of Bell teaches a network access unit and a terminal device of a data communication network.

38. Raffali fails to teach a network access unit provides network access functions for central units of at least two local data communication networks with the central units each providing services for a plurality of terminal devices of a data communication network.

39. Ould-Brahim teaches in column 3, lines 50-67, and in FIG. 1, a first CE device 24 (FIG. 1) is connected to a first VR 14 (FIG. 1) (a central unit) over an access link, where a CE device may be a router (providing services for a plurality of terminal devices), and a BVR 15 (FIG. 1) (a network access unit) is connected to a backbone 22 (FIG. 1), and where a BVR is connected to two VRs, each of which connect to a VPN of a site (see FIG. 1) (two local data communication networks) (a network access unit provides network access functions for central units of at least two local data communication networks with the central units each providing services for a plurality of terminal devices of a data communication network).

40. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ould-Brahim with the teachings of Raffali in view of Bell since Ould-Brahim provides a network that implements virtual private networks, virtual routers, and a VPN dicovery process, which can be introduced into the teachings of Raffali in view of Bell to allow networks of diverse network protocols to establish and efficiently organize and maintain private networks and the secure communications they provide.

41. **Claim 38** is rejected under 35 U.S.C. 103(a) as being unpatentable over Raffali in view of Bell, and further in view of Nilsen (Patent No.: US 7,136,372 B1), hereafter referred to as Nilsen.

42. **In regard to Claim 38**, as presented in the rejection of Claim 33, Raffali in view of Bell teaches a first signaling protocol.

43. Raffali fails to teach a first protocol is a QSIG signaling protocol, or a QSIG based signaling protocol.

44. Nilsen teaches in column 4, lines 36-39, a QSIG access-node would translate call- and connection control messages into the H.323 format, but would tunnel the QSIG messages inside HTTP messages and address these to the service node (a first protocol is a QSIG signaling protocol, or a QSIG based signaling protocol).

45. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Nilsen with the teachings of Raffali in view of Bell since Nilsen provides a QSIG protocol, which can be introduced into the teachings of Raffali in view of Bell to allow signaling for efficiently providing services to customers.

(10) Response to Argument

I. Arguments that Claims 45-46 are Allowable

The argument that ***the translation members of the Raffali reference do not convert messages into different protocols, (Col. 3, lines 49-53; Col. 5, lines 1-15)***, is not persuasive. The examiner notes that Raffali teaches in column 3, lines 48-53, and in FIG. 1, "In order to transfer the message to network 3, the control information (in

the following represented by a header (H) and a trailer (T) with control codes) is translated in a translation member 8 into control information which is compatible with the control protocol in sub-network 3“ (emphasis added by the examiner). This clearly indicates that the header and trailer of a message is translated into a form that is compatible with the control protocol in sub-network 3. The examiner also notes that Raffali teaches in column 5, lines 1-15, and in FIG. 4a, “At the interface of the sub-networks 2 and 3, the “header and trailer are translated into a header and trailer in R format (H_R,T_R)”, and “Finally, at the interface between the sub-networks 5 and 6 the message and its header H_R and trailer T_R are unwrapped, after which said header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6 and which take care of the control of the message through sub-network 6 to terminal 7“. The ***translation*** of a header and trailer of a message into a form that is compatible with a different protocol, and the ***translation*** of a header and a trailer of a message to a different format, and the ***converting*** of a header and trailer to a form that is compatible with a protocol in a sub-network, are each substantively the same as “converting” the header and trailer of the message into a different protocol.

The arguments that ***the translation members of the Raffali reference do not convert messages into different protocols***, and ***to the contrary, the translation members are configured to add encapsulating headers and trailers, (Col. 4, lines 22-47), and such encapsulation means that an "original header H2 is preceded by [the added headers]" and that an original trailer T2 "is followed by [the added***

trailers]", (Col. 4, lines 42-47), is not persuasive. The examiner notes that none of column 4, lines 11-47, or column 4, lines 42-47 of Raffali, are cited in the rejection of Claim 45. Column 4, lines 11-47, and column 4, lines 42-47 of Raffali refer to FIG. 3 of Raffali, and the method and the system of tunneling a message described therein is different from the method and the system of column 4, line 48 to column 5, line 14, and FIGS. 4 and 4a, which are cited in the rejection of Claim 45. There is no mention of a translation member or any translation for the method and the system taught in column 4, lines 11-47, and column 4, lines 42-47 of Raffali, whereas there is a translation member 26 and a conversion of header H_R and trailer T_R into header H_6 and trailer T_6 in the method and system of column 4, line 48 to column 5, line 14, and FIGS. 4 and 4a of Raffali. The tunneling of a packet taught in column 4, lines 11-47, and column 4, lines 42-47 of Raffali may be related to the method and system of column 4, line 48 to column 5, line 14, and FIGS. 4 and 4a of Raffali cited in the office action, but column 4, lines 11-47, and column 4, lines 42-47 of Raffali and the specific method and system taught therein is never cited in the rejection of Claim 45.

The argument that ***Raffali's translation members do not convert any portion of any signaling message***, is not persuasive. As presented in the rejection of Claim 45, Raffali teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, at the interface between the sub-networks 5 and 6 **the message and its header H_R (FIG. 4) and trailer T_R (FIG. 4a) are unwrapped**, after which said **header H_R and trailer T_R are converted into a header H_6 and trailer T_6** which are **compatible with the protocol in sub-network 6** and which take care of the control of the message

through sub-network 6 to terminal 7. The header H_R and the trailer T_R of the message can be reasonably be interpreted as portions of the message, and where the H_R and the trailer T_R are converted to a header H_6 and trailer T_6, this is substantively the same as converting a portion of a signaling message.

The argument that ***the signaling messages relate to "instructions for the exchange of information, which relates to setting up, taking down, and controlling a connection.", Specification, at page 1, lines 17-18***, is not persuasive. Raffali teaches in column 3, lines 44-60, and in FIG. 1, "FIG. 1 shows a terminal 1, which via sub-networks 2 . . . 6 transfers a message to a terminal 7. To this end the message is provided with control information which corresponds with the control protocol within the (source) network 2. In order to transfer the message to network 3, the control information (in the following represented by a header (H) and a trailer (T) with control codes) is translated in a translation member 8 into control information which is compatible with the control protocol in sub-network 3; also, the original header and trailer are replaced by a new header and trailer. It has to be noted that the control information (transmission codes) of messages in some system are situated in the immediate vicinity of the messages to be routed (such as the headers and trailers in the present description of the figures); however, in other systems they can occur separated from said messages." (emphasis added by the examiner). As a result, Raffali teaches that control information is contained within a header and a trailer of a message. Such control information is involved with controlling a connection between terminal 1 and terminal 7 in FIG. 1 of Raffali. A message with control information in its header and

trailer is substantively the same as a “signaling message”. Although column 3, lines 44-60 of Raffali refers to FIG. 1, and not FIG. 3, the text does include a translation member and the translation of control information, and Raffali does not indicate that the message with a header and trailer of FIG. 4 is different from the message with a header and trailer of FIG. 1.

The argument that ***as is well known in the art, signaling messages "are composed of a header that includes a protocol discriminator, a call reference, a message type and a message length, and a body composed of information elements"***, is not persuasive. ***Signaling messages*** are not always restricted to such a definition in all protocols. For example, in TCP, an ACK packet may contain no data and thus contain no information elements (see RFC 1122 - Requirements for Internet Hosts -- Communication Layers, Section 4.2.3.6, available at http://tools.ietf.org/html/rfc1122), and in the broadest reasonable interpretation of ***signaling message***, an ACK packet is a type of ***signaling message***. As presented above, a message of Raffali with control information in its header and trailer for a connection between two terminal is substantively the same as a “signaling message”. Claim 45 does not contain limitations that require ***a header that includes a protocol discriminator, a call reference, a message type and a message length, and a body composed of information elements***.

The argument that ***the tunneling encapsulation taught by Raffali by its very nature does not convert any signaling message***, and ***to the contrary, such tunneling merely appends a data packet to include an additional header and***

trailer to permit the transport of a signaling message without converting the signaling message, is not persuasive. Raffali teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, "**the message, with its new header H_R and trailer T_R**, is **encapsulated in a member 27 by a header H_3 and a trailer T_3** which are compatible with the protocol of the sub-network 3. **The message, with its header H_R and trailer T_R are tunnelled** through the sub-networks 3, 4 and 5 and first decapsulated, in a decapsulation member 32, at the interface between the sub-networks 5 and 6, and subsequently translated from the R format into the format of the protocol in sub-network 6. FIG. 4a diagrammatically shows always one data packet in the sub-networks 2 . . . 6. At the interface of the sub-networks 2 and 3, the header and trailer are translated into a header and trailer in R format (H_R,T_R), after which the message (DATA), with said header H_R and trailer T_R, is transferred through the sub-networks 3 . . . 5 by means of **tunnelling, with the headers H_3, H_4, and H_5 and the trailers T_3, T_4, and T_5,** respectively, being used for the transmission control. Finally, at the interface between the sub-networks 5 and 6 **the message and its header H_R and trailer T_R are unwrapped**, after which **said header H_R and trailer T_R are converted into a header H_6 and trailer T_6** which are compatible with the protocol in sub-network 6 and which take care of the control of the message through sub-network 6 to terminal 7." (emphasis added by the examiner). As shown in FIG. 4 and 4a, the message has a header H_R and trailer T_R when it is sent from translation member 26, and then the message, without removing header H_R and trailer T_R, is encapsulated by member 27 with header H_3 and trailer T3 for a tunnel. At members

28 and 29, header H_3 and trailer T_3 of a tunnel are removed and replaced with header H_4 and trailer T_4, and all the while the message with its header H_R and trailer T_R stays the same. At members 30 and 31, header H_4 and trailer T_4 of a tunnel are removed and replaced with header H_5 and trailer T_5, and all the while the message with its header H_R and trailer T_R stays the same. At member 32, header H_5 and trailer T_5 are removed and no header or trailer of a tunnel replaces them, and this unwraps the message and its header H_R and trailer T_R, ending the tunneling. At member 33, the header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6. As a result, Raffali teaches a method and system where the header H_R and trailer T_R of a message are transferred unchanged by means of tunneling, and when the header H_R and trailer T_R of a message reach a translation member of the destination sub-network, the header H_R and trailer T_R of the message are then converted to header H_6 and trailer T_6 for compatibility in the destination sub-network.

The argument that ***Claim 45 requires "a protocol conversion device converting the signaling message" to a different signaling protocol if the receiving device uses a signaling protocol that is different from the protocol used by the sending device***, is not persuasive. Raffali teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, a system where a message, with a header H_R and a trailer T_R of a reference protocol still attached, is sequentially encapsulated for tunneling with headers H_3, H_4, and H_5, and trailers T_3, T_4, and T_5, and after the encapsulation of the tunneling is finally removed at an interface device of the last

sub-network, the header H_R and trailer T_R of the message are converted into header H_6 and trailer T_6 for compatibility with the protocol in the last sub-network, and this is substantively the same as ***a protocol conversion device converting the signaling message to a different signaling protocol if the receiving device uses a signaling protocol that is different from the protocol used by the sending device***.

The argument that ***those translation members do not determine which destination device the message is intended for***, is not persuasive. The examiner respectfully notes that Claim 45 odes not contain limitations involving a device ***determining which destination device a message is intended for***.

II. Arguments that Raffali Expressly Teaches Away From Converting a Signaling Message to a Signaling Message of a Different Protocol

The argument that ***Raffali Expressly Teaches Away From Converting a Signaling Message to a Signaling Message of a Different Protocol***, and ***Raffali teaches that "transit traffic is transferred unchanged by means of tunneling", (Col. 3, lines 1-2)***, is not persuasive. As presented above, Raffali does teach Converting a Signaling Message to a Signaling Message of a Different Protocol, and Raffali in column 3, lines 1-2, appears to be stating that tunneling itself allows transit traffic to be transferred unchanged, and Raffali clearly teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, that transit traffic, in the form of a message with a header H_R and trailer T_R, is transferred unchanged in tunneling encapsulation headers H_3, H_4, and H_5 and trailers H_3, H_4, and H_5 before arriving at the

interface devices of sub-network 6, where the last tunneling encapsulation header H_5 and trailer T_6 are removed and the header H_R and trailer T_R of the message are converted to header H_6 and trailer T_6.

The argument that ***at Column 4, lines 22-47, Raffali teaches that headers and trailers of original messages are encapsulated and subsequently decapsulated by translation members for the message to pass through a particular sub network***, is not persuasive. As presented above, column 4, lines 22-47 of Raffali refer to FIG. 3, and teaches a method and a system related to, but different from, the method and the system taught in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, and cited in the rejection of Claim 45.

The argument that ***the tunneling of a message by encapsulating the message does not convert a message into a different protocol***, and ***tunneling, as known in the art and as taught in Raffali, only adds header and trailer portions of a message to a particular format***, is not persuasive. Although tunneling does not provide protocol conversion for a message, Raffali clearly teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, that conversion for a message is performed after tunneling is performed.

The argument that ***the conversion required by claims 45 and 46 relates to a conversion of an entire message***, is not persuasive. Examiner notes that Claims 45 and 46 do not state ***entire***, and it is unclear how conversion of an ***entire*** message is performed. If conversion of an ***entire*** message requires that both the overhead and the

payload are respectively converted for compatibility with different protocols, Claims 45 and 46 do not contain limitations for such a requirement.

The argument that ***a conversion of a signaling message in H.323 protocol into a signaling message of a different protocol, such as H.450, (See Specification, at paragraphs 53-55)***, is not persuasive. Claims 45 and 46 do not contain limitations for such conversion between those two protocols.

The argument that ***such conversion typically is associated with "losses of data" "because a specific signaling message according to one signaling protocol cannot be converted into a signaling message with the same purpose according to another signaling protocol", (Specification, at ¶ 10)***, is not persuasive. Claims 45 and 46 do not contain limitations relating to ***losses of data*** involving conversion. In addition, not all conversions involve losses of data, such as conversion of IP packets between IPv4 and IPv6.

The argument that ***tunneling is all that is performed by the translation devices disclosed by Raffali, no conversion of a signaling message is performed***, and ***as such, Raffali expressly teaches that a signaling message should not be converted to another type of protocol, (See Raffali, Col. 4, lines 23-47)***, is not persuasive. As presented above, the method and the system of column 4, lines 23-47 of Raffali, and which involve FIG. 3, are different from the method and the system taught in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a of Raffali, which are cited in the rejection of Claims 45 and 46 and involve translation members and protocol translation.

III. Arguments that Raffali Does Not Teach Or Suggest Any Conversion Of Signaling Messages Nor Any Unit That Determines a Device to Which a Message is to be Sent

The argument that ***no access unit determines what device a message is intended for in Raffali***, and ***Raffali teaches translation members 8 that provide tunneling for messages to be sent through certain sub networks***, and ***those translation members do not determine which destination device the message is intended for, (Col. 3, lines 49-53; Col. 5, lines 1-15)***, is not persuasive. Raffali teaches in column 3, lines 44-59, "FIG. 1 shows a terminal 1, which via sub-networks 2 . . . 6 transfers a message to a terminal 7. To this end the message is provided with control information which corresponds with the control protocol within the (source) network 2. In order to transfer the message to network 3, the control information (in the following represented by a header (H) and a trailer (T) with control codes) is translated in a translation member 8 into control information which is compatible with the control protocol in sub-network 3; also, the original header and trailer are replaced by a new header and trailer. It has to be noted that the control information (transmission codes) of messages in some system are situated in the immediate vicinity of the messages to be routed (such as the headers and trailers in the present description of the figures);" (emphasis added by the examiner). Raffali teaches that a header and a trailer contain control information for transferring a message through a sub-network, and this implicitly teaches that the control information of a header and trailer is sufficient to cause the

message to be routed through a sub-network, and routing that is performed utilizing the control information implies that some type of routing information within the control information that allows the transfer of the message toward the intended destination. As a result, Raffali implicitly teaches some type of routing information within the control information of a header and trailer of a message that allows routing toward a destination terminal, and this implicitly teaches that a device associated with a sub-network must perform the step of examining the control information in order to route the message to a next device of the sub-network as the message is transferred toward the destination terminal, and this is substantively the same as ***determining which destination device a message is intended for***. In any case, the Bell reference is also presented in the rejection of Claim 33 as teaching ***a signaling message comprising destination datum identifying a destination unit***. As presented in the rejection of Claim 33, Bell teaches in column 7, lines 24-56, and in FIG. 2, 3 and 4, a master node (FIGS. 2 and 3) receives one or more data packets, and the one or more data packets are processed 402 (FIG. 4) by the digital signal processing (DSP) by running a demodulation algorithm for the xDSL load, and these processed data packets are stored 404 (FIG. 4) in a memory of the master node, the master node determines 406 (FIG. 4) whether the stored packet includes data targeted for one or more of the nodes within a local network (FIGS. 2 and 3), and where the master node determines 406 (FIG. 4) that a stored packet is targeted for the local network, the master node determines 410 (FIG. 4) what the local identifier (a signaling message comprising destination datum identifying a destination unit) is in order to assist the master node in properly routing the data within

the local network. A master node determining whether stored packet includes data targeted for one or more of the nodes within a local network is substantively the same as ***determining which destination device a message is intended for***.

The argument that ***the translation members disclosed by Raffali merely permit tunneling of a message through different sub networks***, and ***no access unit determines a device to which a message is to be sent and then converts that message into the protocol for that device and sends the message to a destination device***, is not persuasive. Raffali teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, "Finally, at the interface between the sub-networks 5 and 6 the message and its header H_R and trailer T_R are unwrapped, after which said header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6 and which take care of the control of the message through sub-network 6 to terminal 7." (emphasis added by the examiner). The act of unwrapping a message with its header and trailer from the tunneling encapsulation header and trailer, and then converting the header and trailer of the message for compatibility with a protocol of a destination terminal's sub-network, and then transferring the message through a sub-network to a destination terminal, is substantively the same as ***converting that message into the protocol for that device and sending the message to a destination device***.

The argument that ***indeed, there is no determination made by any access unit as to any destination device***, and ***each translation member merely encapsulates a message for use in a particular sub network***, and ***no determination***

is made by any translation member, is not persuasive. As presented above, Raffali implicitly teaches a type of routing information within control information of a message for routing messages though sub-networks. Since a translation member must convert the control information in the header and trailer of a message to ensure that the message is routed toward a destination terminal, and other members must encapsulate the message with its header and trailer with another header and trailer of a tunnel for properly routing the message toward a destination terminal, this implicitly teaches that the translation member and the other members must examine the implied routing information in the control information for proper header and trailer conversion, and for proper header and trailer encapsulation, in order to transfer and route the message through the sub-networks toward the destination terminal. In any case, as presented above, Bell explicitly teaches ***a device that determines a destination device a message is intended for***.

The argument that ***Raffali expressly teaches away from any conversion of a signaling message as required by claims 33-44***, and ***Raffali teaches that "transit traffic is transferred unchanged by means of tunneling", (Col. 3, lines 1-2)***, is not persuasive. As presented above with respect to Claim 45, Raffali does teach Converting a Signaling Message to a Signaling Message of a Different Protocol, and Raffali in column 3, lines 1-2, appears to be stating that tunneling itself allows transit traffic to be transferred unchanged, and Raffali clearly teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, that transit traffic, in the form of a message with a header H_R and trailer T_R, is transferred unchanged in tunneling encapsulation

headers H_3, H_4, and H_5 and trailers H_3, H_4, and H_5 before arriving at the interface devices of sub-network 6, where the last tunneling encapsulation header H_5 and trailer T_6 are removed and the header H_R and trailer T_R of the message are converted to header H_6 and trailer T_6.

The argument that the ***the tunneling performed in the system disclosed by Raffali merely encapsulates and decapsulates messages sent by an originating terminal***, and ***there is no conversion of any signaling message that takes place***, is not persuasive. Raffali teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, "**the message, with its new header H_R and trailer T_R**, is **encapsulated** **in a member 27 by a header H_3 and a trailer T_3** which are compatible with the protocol of the sub-network 3. **The message, with its header H_R and trailer T_R are tunnelled** through the sub-networks 3, 4 and 5 and first decapsulated, in a decapsulation member 32, at the interface between the sub-networks 5 and 6, and subsequently translated from the R format into the format of the protocol in sub-network 6. FIG. 4a diagrammatically shows always one data packet in the sub-networks 2 . . . 6. At the interface of the sub-networks 2 and 3, the header and trailer are translated into a header and trailer in R format (H_R,T_R), after which the message (DATA), with said header H_R and trailer T_R, is transferred through the sub-networks 3 . . . 5 by means of **tunnelling, with the headers H_3, H_4, and H_5 and the trailers T_3, T_4, and T_5,** respectively, being used for the transmission control. Finally, at the interface between the sub-networks 5 and 6 **the message and its header H_R and trailer T_R are unwrapped**, after which **said header H_R and trailer T_R are converted into a**

header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6 and which take care of the control of the message through sub-network 6 to terminal 7." (emphasis added by the examiner). As shown in FIG. 4 and 4a, the message has a header H_R and trailer T_R when it is sent from translation member 26, and then the message, without removing header H_R and trailer T_R, is encapsulated by member 27 with header H_3 and trailer T3 for a tunnel. At members 28 and 29, header H_3 and trailer T_3 of a tunnel are removed and replaced with header H_4 and trailer T_4, and all the while the message with its header H_R and trailer T_R stays the same. At members 30 and 31, header H_4 and trailer T_4 of a tunnel are removed and replaced with header H_5 and trailer T_5, and all the while the message with its header H_R and trailer T_R stays the same. At member 32, header H_5 and trailer T_5 are removed and no header or trailer of a tunnel replaces them, and this unwraps the message and its header H_R and trailer T_R, ending the tunneling. At member 33, the header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6. As a result, Raffali teaches a method and system where the header H_R and trailer T_R of a message are transferred unchanged by means of tunneling, and when the header H_R and trailer T_R of a message reach a translation member of the destination sub-network, the header H_R and trailer T_R of the message are then converted to header H_6 and trailer T_6 for compatibility in the destination sub-network.

The arguments that ***at Column 4, lines 22-47, Raffali teaches that headers and trailers of original messages are merely encapsulated and subsequently***

decapsulated by translation members for the message to pass through a particular sub network, is not persuasive. The examiner notes that none of column 4, lines 11-47, or column 4, lines 42-47 of Raffali, are cited in the rejection of Claim 33. Column 4, lines 42-47 of Raffali refer to FIG. 3 of Raffali, and the method and the system of tunneling a message described therein is different from the method and the system of column 4, line 48 to column 5, line 14, and FIGS. 4 and 4a, which are cited in the rejection of Claim 33. There is no mention of a translation member or any translation for the method and the system taught in column 4, lines 42-47 of Raffali, whereas there is a translation member 26 and a conversion of header H_R and trailer T_R into header H_6 and trailer T_6 in the method and system of column 4, line 48 to column 5, line 14, and FIGS. 4 and 4a of Raffali. The tunneling of a packet taught in column 4, lines 42-47 of Raffali may be related to the method and system of column 4, line 48 to column 5, line 14, and FIGS. 4 and 4a of Raffali cited in the office action, but column 4, lines 42-47 of Raffali and the specific method and system taught therein is never cited in the rejection of Claim 33.

The argument that ***tunneling, as known in the art and as taught in Raffali, only utilizes additions of new header and trailer portions to a message***, and ***tunneling is all that is performed by the translation devices disclosed by Raffali***, is not persuasive. Raffali teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, "**the message, with its new header H_R and trailer T_R**, is **encapsulated in a member 27 by a header H_3 and a trailer T_3** which are compatible with the protocol of the sub-network 3. **The message, with its header H_R and trailer T_R are**

tunnelled through the sub-networks 3, 4 and 5 and first decapsulated, in a decapsulation member 32, at the interface between the sub-networks 5 and 6, and subsequently translated from the R format into the format of the protocol in sub-network 6. FIG. 4a diagrammatically shows always one data packet in the sub-networks 2 . . . 6. At the interface of the sub-networks 2 and 3, the header and trailer are translated into a header and trailer in R format (H_R,T_R), after which the message (DATA), with said header H_R and trailer T_R, is transferred through the sub-networks 3 . . . 5 by means of **tunnelling, with the headers H_3, H_4, and H_5 and the trailers T_3, T_4, and T_5,** respectively, being used for the transmission control. Finally, at the interface between the sub-networks 5 and 6 **the message and its header H_R and trailer T_R are unwrapped**, after which **said header H_R and trailer T_R are converted into a header H_6 and trailer T_6** which are compatible with the protocol in sub-network 6 and which take care of the control of the message through sub-network 6 to terminal 7." (emphasis added by the examiner). As shown in FIG. 4 and 4a, the message has a header H_R and trailer T_R when it is sent from translation member 26, and then the message, without removing header H_R and trailer T_R, is encapsulated by member 27 with header H_3 and trailer T3 for a tunnel. At members 28 and 29, header H_3 and trailer T_3 of a tunnel are removed and replaced with header H_4 and trailer T_4, and all the while the message with its header H_R and trailer T_R stays the same. At members 30 and 31, header H_4 and trailer T_4 of a tunnel are removed and replaced with header H_5 and trailer T_5, and all the while the message with its header H_R and trailer T_R stays the same. At member 32, header H_5 and trailer T_5 are removed

and no header or trailer of a tunnel replaces them, and this unwraps the message and its header H_R and trailer T_R, ending the tunneling. At member 33, the header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6. As a result, Raffali teaches a method and system where the header H_R and trailer T_R of a message are transferred unchanged by means of tunneling, and when the header H_R and trailer T_R of a message reach a translation member of the destination sub-network, the header H_R and trailer T_R of the message are then converted to header H_6 and trailer T_6 for compatibility in the destination sub-network.

The argument that ***a conversion of a signaling message into a new protocol is a conversion of an entire message into that protocol***, is not persuasive. Examiner notes that Claim 33 does not state ***entire***, and it is unclear how conversion of an ***entire*** message is performed. If conversion of an ***entire*** message requires that both the overhead and the payload are respectively converted for compatibility with different protocols, Claim 33 does not contain limitations for such a requirement.

The argument that ***a conversion of a signaling message in H.323 protocol into a signaling message of a different protocol, such as H.450, (See Specification, at paragraphs 53-55)***, is not persuasive. Claim 33 does not contain limitations for such conversion between those two protocols.

IV. Arguments that <u>Bell Does Not Teach Any Conversion Of Signaling Messages</u>

The argument that ***Bell discloses a mechanism for converting data transport protocols used when data is exchanged from a remote system to a local network utilizing copper wiring commonly used for telephone lines and DSL communications***, is not persuasive. The Bell reference does not state or suggest that any of the protocols in its teachings can never utilize ***signaling messages***. Claim 33 does not contain limitations clearly claiming that the method excludes any involvement with a ***data transfer protocol*** or excludes any involvement with any data exchange. In any case, as presented above with respect to Claim 45, the Raffali reference teaches ***signaling messages***, where Raffali teaches in column 3, lines 44-60, and in FIG. 1, "FIG. 1 shows a terminal 1, which via sub-networks 2 . . . 6 transfers a message to a terminal 7. To this end the message is provided with control information which corresponds with the control protocol within the (source) network 2. In order to transfer the message to network 3, the control information (in the following represented by a header (H) and a trailer (T) with control codes) is translated in a translation member 8 into control information which is compatible with the control protocol in sub-network 3; also, the original header and trailer are replaced by a new header and trailer. It has to be noted that the control information (transmission codes) of messages in some system are situated in the immediate vicinity of the messages to be routed (such as the headers and trailers in the present description of the figures); however, in other systems they can occur separated from said messages." (emphasis added by the examiner). As a result, Raffali teaches that control information is contained within a header and a trailer of a message. Such control information is involved with controlling a connection

between terminal 1 and terminal 7 in FIG. 1 of Raffali. A message with control information in its header and trailer is substantively the same as a “signaling message”. Although column 3, lines 44-60 of Raffali refers to FIG. 1, and not FIG. 3, the text does include a translation member and the translation of control information, and Raffali does not indicate that the message with a header and trailer of FIG. 4 is different from the message with a header and trailer of FIG. 1. In the broadest reasonable interpretation of the words ***signaling protocol***, a protocol that utilizes control information with messages can be interpreted as a ***signaling protocol***, and Claim 33 does not contain limitations excluding a protocol that utilizes control information with messages from being interpreted as a ***signaling protocol***.

The argument that ***as is well understood in the art, data transport protocols and data transport messages discussed by Bell are not signaling messages and are unrelated to such messages***, is not persuasive. The examiner respectfully notes that the Bell reference does not state ***data transport messages***. Claim 33 does not contain limitations clearly claiming that the method excludes any involvement with messages that transport data. If the Bell reference implies ***data transport messages***, it is unclear in Claim 33 how ***signaling messages*** are different from ***data transport messages*** and how this difference prevents ***signaling messages*** from being utilized by a protocol in the Bell reference. In any case, as presented above, the Raffali reference teaches ***signaling messages*** and a ***signaling protocol***.

The argument that in ***RFC264 - The Data Transfer Protocol available at http://www.faqs.org/rfcs/rfc264.html, data transport protocols define "a***

mechanism for data transfer which can be used to provide services for block data transfers, file transfers, remote job entry, network mail and other applications", is not persuasive. The examiner respectfully notes that the RFC264 reference includes the words "***and other applications"***, and that ***a data transfer protocol*** is not necessarily limited to the applications listed previously. In addition, the examiner respectfully notes that the applications listed in the RFC264 reference, including "***services for block data transfers, file transfers, remote job entry, network mail"***, could require signaling messages that relate to "instructions for the exchange of information, which relates to setting up, taking down, and controlling a connection", as stated in the specification, at page 1, lines 17-18.

The argument that ***signaling messages and the like utilize different protocols at a different layer***, and ***a data transfer protocol is not a signaling protocol***, and ***such protocols deal with drastically different aspects of networking***, is not persuasive. This is not the case for all protocols. The TCP protocol is a layer protocol that can utilize TCP Selective Acknowledgment Options, ACK packets, and SACK packets that are involved at the same layer with data transmissions of TCP, (see RFC 2018 - TCP Selective Acknowledgment Options, available at http://tools.ietf.org/html/rfc2018), and in the broadest reasonable interpretation of ***signaling message***, an ACK packet or a SACK packet is a type of ***signaling message,*** since both are involved in managing a connection or controlling a connection. Claim 33 does not contain limitations clearly claiming that ***a signaling protocol*** excludes any involvement with messages transporting data.

The argument that ***Bell discloses a system that is configured to permit a local home network and a remote network to both utilize the same copper wiring, Bell, Abstract; Col. 1, lines 45-49; Col. 2, lines 9-12***, is not persuasive. Although the Bell reference permits transmissions through copper wiring, the Bell reference also teaches conversion between protocols for transmissions, where Bell teaches in column 46-49, and in FIGS. 4, the master node determines 412 whether a protocol conversion is required, and if so, converts 414 from the internet protocol to the local protocol.

The argument that ***the system disclosed by Bell may utilize a master node 304 that can convert information from one type of data transfer protocol to another type of data transfer protocol, Col. 6, lines 40-45***, is not persuasive. Although the conversion in Bell involves ***data transfer protocols***, the Bell reference does not exclude ***signaling messages***, and the Raffali reference teaches ***signaling messages*** and a ***signaling protocol***, as presented above.

The argument that ***the master node 304 may include different DSP units 314 and 320 that are configured to utilized different modulation schemes for transferring data, Col. 5, line 45 through Col. 6, line 46; Col. 7, lines 25-54***, is not persuasive. Although the Bell reference permits utilization of different DSPs for different modulation schemes, the Bell reference also teaches conversion between protocols, where Bell teaches in column 46-49, and in FIGS. 4, the master node determines 412 whether a protocol conversion is required, and if so, converts 414 from the internet protocol to the local protocol.

The argument that ***Bell does not teach or suggest any device configured to convert signaling message protocols from one protocol to a different signaling message protocol***, is not persuasive. As presented above, the Bell reference does not state or suggest that any of the protocols in its teachings can never utilize ***signaling messages***, but it does teach conversion between protocols, and the Raffali reference teaches ***signaling messages*** and a ***signaling protocol***.

The argument that ***Bell is silent with respect to the use of different signaling message protocols***, is not persuasive. Since the Bell reference is silent to the use of different signaling message protocols, the Bell reference does not state or suggest the exclusion of the use of different signaling message protocols with its teachings, including its teachings involving conversion between protocols, and this allows the Bell reference to be combined with the Raffali reference, which, as presented above, teaches ***signaling messages*** and a ***signaling protocol***.

The argument that ***to modify Bell to teach or suggest the conversion of signaling message protocols, it would be necessary to alter the fundamental principle of operation of the master node taught by Bell***, is not persuasive. As discussed above, the Raffali reference teaches ***signaling messages***. In the rejection of Claim 33, Raffali teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, the message, with its header H_R and trailer T_R are tunnelled through the sub-networks 3, 4 and 5 (FIG. 4) and first decapsulated, in a decapsulation member 32 (FIG. 4) (network access unit of a third network), at the interface between the sub-networks 5 and 6 (FIG. 4) (transmitting a signaling message from the originating unit to

the network access unit by tunneling via the third network, the signaling message comprising destination datum identifying the destination unit), and subsequently translated from the R format into the format of the protocol in sub-network 6 (FIG. 4) (a network access unit converts a signal message into a second signaling protocol), where at the interface between the sub-networks 5 and 6 the message and its header H_R (FIG. 4) and trailer T_R (FIG. 4a) are unwrapped, after which said header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6 and which take care of the control of the message through sub-network 6 to terminal 7 (FIG. 4). This converting of a header H_R and trailer T_R of a message to a header H_6 and trailer T_6 is substantively the same as ***conversion of signaling message protocols***. As discussed above, the Bell reference does not teach a protocol that excludes ***signaling messages***. The combination of Raffali and Bell shows that the method of confirming if a protocol conversion is required for a message of Bell can be utilized to modify the conversion of signaling messages of Raffali, where Bell clearly provides a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed. Since Raffali clearly teaches conversion of signaling messages between signaling protocols, there is no need to alter the fundamental principle of operation of the master node taught by Bell, and the combination of Raffali and Bell in the rejection of Claim 33 does not suggest or require such an alteration of the master node of Bell.

The argument that ***the DSL modem units utilizing DSP engines would need to be replaced with devices capable of converting signaling message protocols***, and ***such a modification would make Bell's invention inoperable for its stated purpose of permitting different networks to utilize the same copper wired links via the DSP engines of the master node 304***, is not persuasive. The examiner notes that the Bell reference teaches in column 6, lines 1-40, the DSP processors 320 and 314 are utilized primarily for modulation, signal processing, and processes concerning the reception and transmission of signals. The Examiner also notes that in the Bell reference, in column 6, lines 40-43, and in column 7, lines 46-48, an aspect of the master node itself, which is different from the DSPs, converts between protocols and determines whether conversion is required. This aspect of the master node of Bell for confirming if a protocol conversion is required for a message can be introduced into the teachings of Raffali to modify the conversion of signaling messages between signaling protocols of Raffali, as presented above and as presented in the rejection of Claim 33.

V. Arguments that Claims 45-51 Are Allowable

The argument that ***Raffali teaches translation members 8 that provide tunneling for messages to be sent through certain sub networks***, is not persuasive. The examiner respectfully notes that Raffali teaches in column 3, lines 48-53, and in FIG. 1, "In order to transfer the message to network 3, the control information (in the following represented by a header (H) and a trailer (T) with control codes) is translated in a translation member 8 into control information which is compatible with the control

protocol in sub-network 3" (emphasis added by the examiner). This clearly indicates that translation member 8 of Raffali provides protocol translation for a message. In any case, the method and the system of column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a are explicitly cited in the rejection of limitations of Claim 45. The examiner notes that translations members 26 and 33 and members 27 and 32 are devices within the method and the system of column 4, line 48 to column 5, line 14, and FIGS. 4 and 4a cited in the rejection of Claim 45, and Raffali teaches in column 4, lines 54-61, and in column 5, lines 8-14, and in FIG. 4 and 4a, "At the transition of the sub-networks 2 and 3, in a translation member 26, the header H_2 and trailer T_2 are translated into a header H_R and a trailer T_R in accordance with the format of a reference protocol ("R format"), after which the message, with its new header H_R and trailer T_R, is encapsulated in a member 27 by a header H_3 and a trailer T_3 which are compatible with the protocol of the sub-network 3." (emphasis added by the examiner). This indicates that in the method and the system of FIGS. 4 and 4a of Raffali, the translations members 26 and 33 respectively translate messages between protocol formats, and members 27 and 32 respectively encapsulate a message into a tunnel and decapsulate a message out of a tunnel.

The argument that ***the translation members of the Raffali reference do not convert messages into different protocols, (Col. 3, lines 49-53; Col. 5, lines 1-15)***, is not persuasive. The examiner notes that Raffali teaches in column 3, lines 48-53, and in FIG. 1, "In order to transfer the message to network 3, the control information (in the following represented by a header (H) and a trailer (T) with control codes) is

translated in a translation member 8 into control information which is compatible with the control protocol in sub-network 3“ (emphasis added by the examiner). This clearly indicates that the header and trailer of a message is translated into a form that is compatible with the control protocol in sub-network 3. The examiner also notes that Raffali teaches in column 5, lines 1-15, and in FIG. 4a, “At the interface of the sub-networks 2 and 3, the “header and trailer are translated into a header and trailer in R format (H_R,T_R)”, and “Finally, at the interface between the sub-networks 5 and 6 the message and its header H_R and trailer T_R are unwrapped, after which said header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6 and which take care of the control of the message through sub-network 6 to terminal 7“. The ***translation*** of a header and trailer of a message into a form that is compatible with a different protocol, and the ***translation*** of a header and a trailer of a message to a different format, and the ***converting*** of a header and trailer to a form that is compatible with a protocol in a sub-network, are each substantively the same as “converting” the header and trailer of the message into a different protocol.

The arguments that ***the translation members of the Raffali reference do not convert messages into different protocols***, and ***to the contrary, the translation members are configured to add encapsulating headers and trailers, (Col. 4, lines 22-47)***, and ***such encapsulation means that an "original header H2 is preceded by [the added headers]" and that an original trailer T2 "is followed by [the added trailers]", (Col. 4, lines 42-47)***, is not persuasive. The examiner notes that none of

column 4, lines 11-47, or column 4, lines 42-47 of Raffali, are cited in the rejection of Claim 45. Column 4, lines 11-47, and column 4, lines 42-47 of Raffali refer to FIG. 3 of Raffali, and the method and the system of tunneling a message described therein is different from the method and the system of column 4, line 48 to column 5, line 14, and FIGS. 4 and 4a, which are cited in the rejection of Claim 45. There is no mention of a translation member or any translation for the method and the system taught in column 4, lines 11-47, and column 4, lines 42-47 of Raffali, whereas there is a translation member 26 and a conversion of header H_R and trailer T_R into header H_6 and trailer T_6 in the method and system of column 4, line 48 to column 5, line 14, and FIGS. 4 and 4a of Raffali. The tunneling of a packet taught in column 4, lines 11-47, and column 4, lines 42-47 of Raffali may be related to the method and system of column 4, line 48 to column 5, line 14, and FIGS. 4 and 4a of Raffali cited in the office action, but column 4, lines 11-47, and column 4, lines 42-47 of Raffali and the specific method and system taught therein is never cited in the rejection of Claim 45.

The argument that ***Raffali's translation members do not convert any portion of any signaling message***, is not persuasive. As presented in the rejection of Claim 45, Raffali teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, at the interface between the sub-networks 5 and 6 **the message and its header H_R (FIG. 4) and trailer T_R (FIG. 4a) are unwrapped**, after which said **header H_R and trailer T_R are converted into a header H_6 and trailer T_6** which are **compatible with the protocol in sub-network 6** and which take care of the control of the message through sub-network 6 to terminal 7. The header H_R and the trailer T_R of the

message can be reasonably be interpreted as portions of the message, and where the H_R and the trailer T_R are converted to a header H_6 and trailer T_6, this is substantively the same as converting a portion of a signaling message.

The argument that ***as is well known in the art, signaling messages "are composed of a header that includes a protocol discriminator, a call reference, a message type and a message length, and a body composed of information elements"***, is not persuasive. ***Signaling messages*** are not always restricted to such a definition in all protocols. For example, in TCP, an ACK packet may contain no data and thus contain no information elements (see RFC 1122 - Requirements for Internet Hosts -- Communication Layers, Section 4.2.3.6, available at http://tools.ietf.org/html/rfc1122), and in the broadest reasonable interpretation of ***signaling message***, an ACK packet is a type of ***signaling message***. Claim 45 does not contain limitations that require ***a header that includes a protocol discriminator, a call reference, a message type and a message length, and a body composed of information elements***. Raffali teaches in column 3, lines 44-60, and in FIG. 1, "FIG. 1 shows a terminal 1, which via sub-networks 2 . . . 6 transfers a message to a terminal 7. To this end the message is provided with control information which corresponds with the control protocol within the (source) network 2. In order to transfer the message to network 3, the control information (in the following represented by a header (H) and a trailer (T) with control codes) is translated in a translation member 8 into control information which is compatible with the control protocol in sub-network 3; also, the original header and trailer are replaced by a new header and trailer. It has to be noted

that the control information (transmission codes) of messages in some system are situated in the immediate vicinity of the messages to be routed (such as the headers and trailers in the present description of the figures); however, in other systems they can occur separated from said messages." (emphasis added by the examiner). As a result, Raffali teaches that control information is contained within a header and a trailer of a message. Such control information is involved with controlling a connection between terminal 1 and terminal 7 in FIG. 1 of Raffali. A message with control information in its header and trailer is substantively the same as a "signaling message". Although column 3, lines 44-60 of Raffali refers to FIG. 1, and not FIG. 3, the text does include a translation member and the translation of control information, and Raffali does not indicate that the message with a header and trailer of FIG. 4 is different from the message with a header and trailer of FIG. 1.

The argument that ***the tunneling encapsulation taught by Raffali by its very nature does not convert any signaling message***, and ***to the contrary, such tunneling merely appends a data packet to include an additional header and trailer to permit the transport of a signaling message without converting the signaling message***, is not persuasive. Raffali teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, "**the message, with its new header H_R and trailer T_R**, is **encapsulated in a member 27 by a header H_3 and a trailer T_3** which are compatible with the protocol of the sub-network 3. **The message, with its header H_R and trailer T_R are tunnelled** through the sub-networks 3, 4 and 5 and first decapsulated, in a decapsulation member 32, at the interface between the sub-

networks 5 and 6, and subsequently translated from the R format into the format of the protocol in sub-network 6. FIG. 4a diagrammatically shows always one data packet in the sub-networks 2 . . . 6. At the interface of the sub-networks 2 and 3, the header and trailer are translated into a header and trailer in R format (H_R,T_R), after which the message (DATA), with said header H_R and trailer T_R, is transferred through the sub-networks 3 . . . 5 by means of **tunnelling, with the headers H_3, H_4, and H_5 and the trailers T_3, T_4, and T_5,** respectively, being used for the transmission control. Finally, at the interface between the sub-networks 5 and 6 **the message and its header H_R and trailer T_R are unwrapped**, after which **said header H_R and trailer T_R are converted into a header H_6 and trailer T_6** which are compatible with the protocol in sub-network 6 and which take care of the control of the message through sub-network 6 to terminal 7." (emphasis added by the examiner). As shown in FIG. 4 and 4a, the message has a header H_R and trailer T_R when it is sent from translation member 26, and then the message, without removing header H_R and trailer T_R, is encapsulated by member 27 with header H_3 and trailer T3 for a tunnel. At members 28 and 29, header H_3 and trailer T_3 of a tunnel are removed and replaced with header H_4 and trailer T_4, and all the while the message with its header H_R and trailer T_R stays the same. At members 30 and 31, header H_4 and trailer T_4 of a tunnel are removed and replaced with header H_5 and trailer T_5, and all the while the message with its header H_R and trailer T_R stays the same. At member 32, header H_5 and trailer T_5 are removed and no header or trailer of a tunnel replaces them, and this unwraps the message and its header H_R and trailer T_R, ending the tunneling. At

member 33, the header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6. As a result, Raffali teaches a method and system where the header H_R and trailer T_R of a message are transferred unchanged by means of tunneling, and when the header H_R and trailer T_R of a message reach a translation member of the destination sub-network, the header H_R and trailer T_R of the message are then converted to header H_6 and trailer T_6 for compatibility in the destination sub-network.

The argument that ***those translation members do not determine which destination device the message is intended for***, is not persuasive. The examiner respectfully notes that Claim 45 odes not contain limitations involving a device ***determining which destination device a message is intended for***.

VI. Arguments that Raffali Expressly Teaches Away From Protocol Conversion of a Signaling Message

The argument that ***Raffali Expressly Teaches Away From Converting a Signaling Message to a Signaling Message of a Different Protocol***, and ***Raffali teaches that "transit traffic is transferred unchanged by means of tunneling", (Col. 3, lines 1-2)***, is not persuasive. As presented above, Raffali does teach Converting a Signaling Message to a Signaling Message of a Different Protocol, and Raffali in column 3, lines 1-2, appears to be stating that tunneling itself allows transit traffic to be transferred unchanged, and Raffali clearly teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, that transit traffic, in the form of a message

with a header H_R and trailer T_R, is transferred unchanged in tunneling encapsulation headers H_3, H_4, and H_5 and trailers H_3, H_4, and H_5 before arriving at the interface devices of sub-network 6, where the last tunneling encapsulation header H_5 and trailer T_6 are removed and the header H_R and trailer T_R of the message are converted to header H_6 and trailer T_6.

The argument that ***at Column 4, lines 22-47, Raffali teaches that headers and trailers of original messages are encapsulated and subsequently decapsulated by translation members for the message to pass through a particular sub network***, is not persuasive. As presented above, column 4, lines 22-47 of Raffali refer to FIG. 3, and teaches a method and a system related to, but different from, the method and the system taught in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, and cited in the rejection of Claim 45.

The argument that ***the tunneling of a message by encapsulating the message does not convert a message into a different protocol***, and ***tunneling, as known in the art and as taught in Raffali, only adds header and trailer portions of a message to a particular format***, is not persuasive. Although tunneling does not provide protocol conversion for a message, Raffali clearly teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, that conversion for a message is performed after tunneling is performed.

The argument that ***the conversion relates to a conversion of an entire message requires by claims 45 through 51***, is not persuasive. Examiner notes that Claims 45-51 do not state ***entire***, and it is unclear how conversion of an ***entire***

message is performed. If conversion of an ***entire*** message requires that both the overhead and the payload are respectively converted for compatibility with different protocols, Claims 45-51 do not contain limitations for such a requirement.

The argument that ***a conversion of a signaling message in H.323 protocol into a signaling message of a different protocol, such as H.450, (See Specification, at paragraphs 53-55)***, is not persuasive. Claims 45-51 do not contain limitations for such conversion between those two protocols.

The argument that ***tunneling is all that is performed by the translation devices disclosed by Raffali, no conversion of a signaling message is performed***, and ***as such, Raffali expressly teaches that a signaling message should not be converted to another type of protocol, (See Raffali, Col. 4, lines 23-47)***, is not persuasive. As presented above, the method and the system of column 4, lines 23-47 of Raffali, and which involve FIG. 3, are different from the method and the system taught in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a of Raffali, which are cited in the rejection of Claims 45 and 46 and involve translation members and protocol translation.

VII. Arguments that Bell Does Not Teach Any Conversion Of Signaling Messages

The argument that ***Bell discloses a mechanism for converting data transport protocols used when data is exchanged from a remote system to a local network utilizing copper wiring commonly used for telephone lines and DSL communications***, is not persuasive. The Bell reference does not state or suggest that

any of the protocols in its teachings can never utilize ***signaling messages***. Claims 45-51 do not contain limitations clearly claiming that the method excludes any involvement with a ***data transfer protocol*** or excludes any involvement with any data exchange. In any case, as presented above with respect to Claim 45, the Raffali reference teaches ***signaling messages***, where Raffali teaches in column 3, lines 44-60, and in FIG. 1, "FIG. 1 shows a terminal 1, which via sub-networks 2 . . . 6 transfers a message to a terminal 7. To this end the message is provided with control information which corresponds with the control protocol within the (source) network 2. In order to transfer the message to network 3, the control information (in the following represented by a header (H) and a trailer (T) with control codes) is translated in a translation member 8 into control information which is compatible with the control protocol in sub-network 3; also, the original header and trailer are replaced by a new header and trailer. It has to be noted that the control information (transmission codes) of messages in some system are situated in the immediate vicinity of the messages to be routed (such as the headers and trailers in the present description of the figures); however, in other systems they can occur separated from said messages." (emphasis added by the examiner). As a result, Raffali teaches that control information is contained within a header and a trailer of a message. Such control information is involved with controlling a connection between terminal 1 and terminal 7 in FIG. 1 of Raffali. A message with control information in its header and trailer is substantively the same as a "signaling message". Although column 3, lines 44-60 of Raffali refers to FIG. 1, and not FIG. 3, the text does include a translation member and the translation of control information, and Raffali does

not indicate that the message with a header and trailer of FIG. 4 is different from the message with a header and trailer of FIG. 1. In the broadest reasonable interpretation of the words ***signaling protocol***, a protocol that utilizes control information with messages can be interpreted as a ***signaling protocol***, and Claims 45-51 do not contain limitations excluding a protocol that utilizes control information with messages from being interpreted as a ***signaling protocol***.

The argument that ***as is well understood in the art, data transport protocols and data transport messages discussed by Bell are not signaling messages and are unrelated to such messages***, is not persuasive. The examiner respectfully notes that the Bell reference does not state ***data transport messages***. Claims 45-51 do not contain limitations clearly claiming that the method excludes any involvement with messages that transport data. If the Bell reference implies ***data transport messages***, it is unclear in Claims 45-51 how ***signaling messages*** are different from ***data transport messages*** and how this difference prevents ***signaling messages*** from being utilized by a protocol in the Bell reference. In any case, as presented above, the Raffali reference teaches ***signaling messages*** and a ***signaling protocol***.

The argument that in ***RFC264 - The Data Transfer Protocol available at http://www.faqs.org/rfcs/rfc264.html, data transport protocols define "a mechanism for data transfer which can be used to provide services for block data transfers, file transfers, remote job entry, network mail and other applications"***, is not persuasive. The examiner respectfully notes that the RFC264 reference includes the words "***and other applications"***, and that ***a data transfer protocol*** is not

necessarily limited to the applications listed previously. In addition, the examiner respectfully notes that the applications listed in the RFC264 reference, including "***services for block data transfers, file transfers, remote job entry, network mail"***, could require signaling messages that relate to "instructions for the exchange of information, which relates to setting up, taking down, and controlling a connection", as stated in the specification, at page 1, lines 17-18.

The argument that ***signaling messages and the like utilize different protocols at a different layer***, and ***a data transfer protocol is not a signaling protocol***, and ***such protocols deal with drastically different aspects of networking***, is not persuasive. This is not the case for all protocols. The TCP protocol is a layer protocol that can utilize TCP Selective Acknowledgment Options, ACK packets, and SACK packets that are involved at the same layer with data transmissions of TCP, (see RFC 2018 - TCP Selective Acknowledgment Options, available at http://tools.ietf.org/html/rfc2018), and in the broadest reasonable interpretation of ***signaling message***, an ACK packet or a SACK packet is a type of ***signaling message,*** since both are involved in managing a connection or controlling a connection. Claims 45-51 do not contain limitations clearly claiming that ***a signaling protocol*** excludes any involvement with messages transporting data.

The argument that ***Bell discloses a system that is configured to permit a local home network and a remote network to both utilize the same copper wiring, Bell, Abstract; Col. 1, lines 45-49; Col. 2, lines 9-12***, is not persuasive. Although the Bell reference permits transmissions through copper wiring, the Bell reference also

teaches conversion between protocols for transmissions, where Bell teaches in column 46-49, and in FIGS. 4, the master node determines 412 whether a protocol conversion is required, and if so, converts 414 from the internet protocol to the local protocol.

The argument that ***the system disclosed by Bell may utilize a master node 304 that can convert information from one type of data transfer protocol to another type of data transfer protocol, Col. 6, lines 40-45***, is not persuasive. Although the conversion in Bell involves ***data transfer protocols***, the Bell reference does not exclude ***signaling messages***, and the Raffali reference teaches ***signaling messages*** and a ***signaling protocol***, as presented above.

The argument that ***the master node 304 may include different DSP units 314 and 320 that are configured to utilized different modulation schemes for transferring data, Col. 5, line 45 through Col. 6, line 46; Col. 7, lines 25-54***, is not persuasive. Although the Bell reference permits utilization of different DSPs for different modulation schemes, the Bell reference also teaches conversion between protocols, where Bell teaches in column 46-49, and in FIGS. 4, the master node determines 412 whether a protocol conversion is required, and if so, converts 414 from the internet protocol to the local protocol.

The argument that ***Bell does not teach or suggest any device configured to convert signaling message protocols from one protocol to a different signaling message protocol***, is not persuasive. As presented above, the Bell reference does not state or suggest that any of the protocols in its teachings can never utilize ***signaling***

messages, but it does teach conversion between protocols, and the Raffali reference teaches ***signaling messages*** and a ***signaling protocol***.

The argument that ***Bell is silent with respect to the use of different signaling message protocols***, is not persuasive. Since the Bell reference is silent to the use of different signaling message protocols, the Bell reference does not state or suggest the exclusion of the use of different signaling message protocols with its teachings, including its teachings involving conversion between protocols, and this allows the Bell reference to be combined with the Raffali reference, which, as presented above, teaches ***signaling messages*** and a ***signaling protocol***.

The argument that ***the examiner relies on Bell's disclosure of a master node potentially converting received data into a different transport protocol***, and ***such a reading of Bell is incorrect and ignores the context and technology being taught by Bell***, and ***the conversion of data transport protocols taught by Bell merely relate to different modulations that may be used for transporting data over copper wires***, is not persuasive.

The argument that ***the master node 304 may include different DSP units 314 and 320 that are configured to utilized different modulation schemes for transferring data, Col. 5, line 45 through Col. 6, line 46; Col. 7, lines 25-54***, is not persuasive. Although the Bell reference permits utilization of different DSPs for different modulation schemes and permits transmissions through copper wiring, the Bell reference also teaches conversion between protocols, where Bell teaches in column 46-49, and in FIGS. 4, the master node determines 412 whether a protocol conversion is

required, and if so, converts 414 from the internet protocol to the local protocol. The Bell reference does not state or suggest that a modulation is a protocol, or a protocol is a modulation. Although the conversion in Bell involves ***data transfer protocols***, the Bell reference does not exclude ***signaling messages***, and the Raffali reference teaches ***signaling messages*** and a ***signaling protocol***, as presented above.

The argument that ***to modify Bell to teach or suggest the conversion of signaling message protocols, it would be necessary to alter the fundamental principle of operation of the master node taught by Bell***, is not persuasive. As discussed above, the Raffali reference teaches ***signaling messages***. In the rejection of Claim 45, Raffali teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, the message, with its header H_R and trailer T_R are tunnelled through the sub-networks 3, 4 and 5 (FIG. 4) and first decapsulated, in a decapsulation member 32 (FIG. 4) (network access unit of a third network), at the interface between the sub-networks 5 and 6 (FIG. 4) (transmitting a signaling message from the originating unit to the network access unit by tunneling via the third network, the signaling message comprising destination datum identifying the destination unit), and subsequently translated from the R format into the format of the protocol in sub-network 6 (FIG. 4) (a network access unit converts a signal message into a second signaling protocol), where at the interface between the sub-networks 5 and 6 the message and its header H_R (FIG. 4) and trailer T_R (FIG. 4a) are unwrapped, after which said header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6 and which take care of the control of the message through

sub-network 6 to terminal 7 (FIG. 4). This converting of a header H_R and trailer T_R of a message to a header H_6 and trailer T_6 is substantively the same as ***conversion of signaling message protocols***. As discussed above, the Bell reference does not teach a protocol that excludes ***signaling messages***. The combination of Raffali and Bell shows that the method of confirming if a protocol conversion is required for a message of Bell can be utilized to modify the conversion of signaling messages of Raffali, where Bell clearly provides a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed. Since Raffali clearly teaches conversion of signaling messages between signaling protocols, there is no need to alter the fundamental principle of operation of the master node taught by Bell, and the combination of Raffali and Bell in the rejections of Claims 47-51 do not suggest or require such an alteration of the master node of Bell.

The argument that ***the DSL modem units utilizing DSP engines would need to be replaced with devices capable of converting signaling message protocols***, and ***such a modification would make Bell's invention inoperable for its stated purpose of permitting different networks to utilize the same copper wired links via the DSP engines of the master node 304***, is not persuasive. The examiner notes that the Raffali reference teaches in column 6, lines 1-40, the DSP processors 320 and 314 are utilized primarily for modulation, signal processing, and processes concerning the reception and transmission of signals. The Examiner also notes that in column 6, lines

40-43, and in column 7, lines 46-48, an aspect of the master node itself, which is different from the DSPs, converts between protocols and determines whether conversion is required. This aspect of the master node of Bell for confirming if a protocol conversion is required for a message can be introduced into the teachings of Raffali to modify the conversion of signaling messages between signaling protocols of Raffali, as presented above and as presented in the rejections of Claims 47-51.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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/J.S./
Patent Examiner
09-07-2010

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